

is divided by the first programmable divider 16. The frequency of the local oscillation signal is controlled by a tuning voltage V_t , a band selection signal V_{hi} for receiving VHF high-band and a band selection signal V_{lo} for receiving VHF low-band which are applied to the resonance circuit 22. To receive a UHF channel, a band selection signal V_{hi} for receiving VHF high-band and a band selection signal V_{lo} for receiving VHF low-band are not applied to the resonance circuit 22, switch diodes 23a and 23b are off, and the local oscillator 19 outputs a local oscillation signal having a frequency of 847 to 517 MHz. To receive a VHF high-band channel, a band selection signal V_{hi} for receiving VHF high-band is applied to the resonance circuit 22, the switch diode 23a is turned on to activate a capacitor 24a, a band selection signal V_{lo} for receiving VHF low-band is not applied to turn off the switch diode 23b, and the local oscillator 19 outputs a local oscillation signal having a frequency of 771 to 663 MHz. To receive a VHF low-band channel, a band selection signal V_{lo} for receiving VHF low-band is applied to the resonance circuit 22, the switch diode 23b is turned on to activate a capacitor 24b, a band selection signal V_{hi} for receiving VHF high-band is not applied to turn off the switch diode 23a, and the local oscillator 19 outputs a local oscillation signal having a frequency of 645 to 505 MHz.

The local oscillation signal output from the local

oscillator 19 is output to the first programmable divider 16 and the PLL IC 20. The PLL IC 20 compares the local oscillation signal output from the local oscillator 19 with a reference oscillation signal output from the quartz oscillator 21 and controls a tuning voltage V_t to adjust the frequency of the reference oscillation signal to a predetermined frequency. One of the band selection signals V_u , V_{hi} and V_{lo} is applied to the first programmable divider 16 from the PLL IC 20. To receive a UHF channel TV signal, the band selection signal V_u for receiving UHF is applied to the first programmable divider 16, the dividing rate of the first programmable divider 16 is set to 1, and the local oscillation signal applied to the first programmable divider 16 is directly output to the first mixer 9. To receive a VHF high-band channel TV signal, the band selection signal V_{hi} for receiving VHF high-band is applied to the first programmable divider 16, the dividing rate of the first programmable divider 16 is set to $1/3$, and the local oscillation signal applied to the first programmable divider 16 is divided to generate a signal having a frequency $1/3$ that of the local oscillation signal which is then output to the first mixer 9. To receive a VHF low-band channel TV signal, the band selection signal V_{lo} for receiving VHF low-band is applied to the first programmable divider 16, the dividing rate of the first programmable divider 16 is set to $1/5$, and the local oscillation signal applied to the first

programmable divider 16 is divided to generate a signal having a frequency $1/5$ that of the local oscillation signal which is then output to the first mixer 10.

In the above embodiment, the intermediate frequency is 44 MHz. When the intermediate frequency is 0 Hz, to receive a UHF channel, the local oscillator 19 is oscillated at 803 to 473 MHz, and the dividing rate of the first programmable divider 16 is set to 1. To receive a VHF high-band channel, the local oscillator 19 is oscillated at 639 to 531 MHz and the dividing rate of the first programmable divider 16 is set to $1/3$. To receive a VHF low-band channel, the local oscillator 19 is oscillated at 765 to 513 MHz and the dividing rate of the first programmable divider 16 is set to $1/9$.

When the TV tuner of the present invention is used in products to be marketed in Japan, as the UHF band is 770 to 470 MHz, the VHF high-band is 222 to 170 MHz and the VHF low-band is 108 to 90 MHz and the intermediate frequency is generally 57 MHz. Therefore, to receive a UHF channel, the local oscillator 19 is oscillated at 824 to 530 MHz and the dividing rate of the first programmable divider 16 is set to 1. To receive a VHF high-band channel, the local oscillator 19 is oscillated at 810 to 690 MHz and the dividing rate of the first programmable divider 16 is set to $1/3$. To receive a VHF low-band channel, the local oscillator 19 is oscillated at 648 to 600 MHz and the dividing rate of the first programmable divider 16